Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for a video motion anomaly detector for processing video images to detect an event of interest, comprising the steps of:

receiving, by the video motion anomaly detector, a video signal representing the video images to be processed;

extracting, by the video motion anomaly detector, at least one point feature from the video signal;

tracking, by the video motion anomaly detector, the position and movement of the at least one point feature within the video images to generate a corresponding at least one track, each of said at least one track representing a corresponding point feature in terms of its position and its velocity within each of the video images;

using, by the video motion anomaly detector, an iterative learning process to derive a normal pattern of behavior for each position within the video ~~image~~ images in terms of observed incidences of point feature velocity at said each position;

comparing, by the video motion anomaly detector, present behavior of a track at a certain position within the image to the respective derived normal

pattern of behavior at the certain position in terms of observed point feature velocity at the certain position; and

in response to the present behavior falling outside the normal pattern of behavior in terms of observed point feature velocity at the certain position, ~~generating~~ the video motion anomaly detector generates an alarm signal.

2. (Previously Presented) The method according to claim 1, wherein the alarm signal causes at least one of the following effects:

draw the attention of an operator;

place an index mark at the appropriate place in recorded video data; and

trigger selective recording of video data.

3. (Previously Presented) The method according to claim 1 wherein the learning process accumulates data representing the behavior of the track(s) over a period of time in a four-dimensional histogram, said four dimensions representing x-position, y-position, x-velocity and y-velocity, of the track(s) within the video image.

4. (Previously Presented) The method according to claim 3, wherein:

the learn behavior stage segregates the tracks according to a velocity threshold;

tracks moving at a velocity below the velocity threshold are considered stationary while tracks moving at a velocity in excess of the velocity threshold are considered mobile;

data concerning the mobile tracks is stored in said four-dimensional histogram; and

data concerning the stationary tracks is stored in a two-dimension histogram representing x-position and y-position within the video image.

5. (Previously Presented) The method according to claim 3, wherein a cell size of the four-dimensional histogram varies with speed.

6. (Previously Presented) The method according to claim 3, wherein the histogram is periodically de-weighted in order to bias the result of the learning process towards more recent events.

7. (Previously Presented) The method according to claim 1, wherein the comparison process classifies a track according to a comparison of the frequency of occupation of a histogram cell representing a corresponding position and velocity within the video images with an occupancy threshold.

8. (Previously Presented) The method according to claim 7 wherein the comparison process acts to classify as normal behavior a track corresponding to a histogram cell which is adjacent or near a histogram cell which is above the occupancy threshold, despite the track corresponding to a histogram cell which is below the occupancy threshold, where one histogram cell is considered to be near another if the distance between them is below a predetermined distance threshold.

9. (Previously Presented) The method according to claim 1, wherein abnormal tracks are filtered, whereby an active alarm signal is generated in response to an abnormal track which resembles a number of other abnormal tracks, in terms of at least one of position, velocity and time.

10. (Previously Presented) The method according to claim 1, wherein abnormal tracks are filtered, whereby an active alarm signal is generated in response only to an abnormal track which has been classified as abnormal on a predetermined number of occasions.

11. (Previously Presented) The method according to claim 1, wherein abnormal tracks are filtered, whereby an active alarm signal is generated in response only to a track being classified as abnormal for the first time.

12. (Previously Presented) The method according to claim 1, wherein abnormal tracks are filtered, whereby an active alarm signal is generated only in response to a filtered version of a classification as abnormal rising above a predetermined threshold value.

13. (Previously Presented) The method according to claim 1, wherein subsequent active alarm signals are inhibited for a predetermined time interval after a first active alarm signal has been produced.

14. (Previously Presented) The method according to claim 1, wherein subsequent active alarm signals are inhibited if caused by an abnormal track within a predetermined distance of another track which has previously generated an alarm.

15. (Currently Amended) Apparatus for processing video images to detect an event of interest, comprising:

a source of video images which produces a video signal representing the video images to be processed;

a feature extraction device that receives the video signal, and produces data representing at least one point feature detected within the image;

a feature tracking device that receives the data representing said at least one point feature, and produces data representing a track that is representative of position and velocity of each of said at least one point feature within the image;

a learning device that receives the data representing tracks of said at least one point feature, and derives a normal range of behavior of each position within the video ~~image~~ images in terms of observed incidences of point feature velocity at said each position in response to operation of a learning process on the data representing the tracks;

a classification device that receives both a signal representing the normal range of behavior and the data representing the tracks, and is adapted to compare the signal and the data for a corresponding position within the video image and to issue a normal/abnormal signal in accordance with the outcome of such comparison; and

an alarm generation device that receives the normal/abnormal signal and generates at least one active alarm signal in response to the normal/abnormal signal indicating abnormal behavior of at least one track.

Claims 16 and 17 (Cancelled)